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EXAMINER	
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ART UNIT	**PAPER NUMBER**
1632	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/680,287	**Applicant(s)** ASKEW ET AL.
	Examiner Joanne Hama, Ph.D.	**Art Unit** 1632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.
  4a) Of the above claim(s) *14-48* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-13 and 45-48* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant filed a response to the Non-Final Action of January 27, 2006 on April 27, 2006. Claims 14-44 are withdrawn. Claims 1-13, 45, 46 are amended. Claims 47, 48 are new.

Claims 1-13, 45-48 are under consideration.

Withdrawn Rejections

35 U.S.C. § 112, 1st parag., Written Description

Applicant's arguments, see pages 19-20 of Applicant's response, filed April 27, 2006, with respect to the rejection of claims 1-13, 45, 46 have been fully considered and are persuasive. Applicant has amended the claims to address the issue of Written Description. The phrase, "comprising at least 15 contiguous nucleotides of SEQ ID NO. 2 including at least the thymine at position 582 of SEQ ID NO. 2" is deleted. The rejection of claims 1-13, 45, 46 has been withdrawn.

New/Maintained Rejections

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13, 45-48 remain provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-8, 10-14, 16 of U.S. Patent No. 10/477,238. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant invention and the '238 claims have overlapping scope. That is, both sets of claims are drawn to a transgenic rodent that comprises a transgene comprising SEQ ID NO. 2 or SEQ ID NO. 4.

It is acknowledged that the Applicant requests that the rejection be held in abeyance until one or more claims are declared to be allowable in the instant of '238 application; however, until such time, the rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13, 45-48 are newly rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The final Written Description Examination guidelines that were published on January 5, 2001 (66 FR 1099; available at http://www.uspto.gov/web/menu/current.html#register).

The written description requirement for a claimed genus is satisfied by sufficient description of a representative number of species by actual reduction to practice and by disclosure of relevant identifying characteristics, i.e. structure or other physical and/or chemical properties by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics sufficient to show applicant were in possession of the claimed genus.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111 (Fed. Cir. 1991), clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" Vas-Cath Inc. v. Mahurkar, 19USPQ2d at 1117. The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." Vas-Cath Inc. v. Mahurkar, 19USPQ2d at 1116.

While the specification and the art at the time of filing teach the amino acid sequence of human LRP-5, human LRP-6, and mouse LRP-5, the specification fails to adequately describe other amino acid sequences which are homologs of SEQ ID NO. 4. It is understood from the specification that SEQ ID NO. 4 is the amino acid sequence of human high bone mass (HBM) protein. HBM protein is human LRP-5 comprising an amino acid substitution from gly to val at position 171. The nucleic acid sequence that encodes SEQ ID NO. 4 is SEQ ID NO. 2. While the specification does not provide a definition of "homolog," the specification provides indicators as to what is envisioned as being a homolog of LRP-5. In addition to teaching that there is a mouse homolog of LRP-5 (specification, parag. 127), the specification teaches that LRP-6 is a homolog of LRP-5 (specification, parag. 184). The specification teaches that "variants" of SEQ ID NO. 2 include polynucleotides having at least about 90%, preferably 95%, or more preferably 98% similarity of identity to the nucleic acid sequence of SEQ ID NO. 2 or fragments thereof (specification, parag. 159). While it is not entirely clear that "homologs" of LRP-5 are a subset of "variants" of LRP-5, or if "homologs" is synonymous with "variants," the claimed invention as a whole is not adequately described if the claims require essential or critical elements which are not adequately described in the specification and which are not conventional in the art as of Applicant's effective filing date. Possession may be shown by actual reduction to practice, clear depiction of the invention in a detailed drawing, or by describing the invention with sufficient relevant identifying characteristics (as it relates to the claimed invention as a whole) such that a person skilled in the art would recognize that the inventor had possession of the claimed invention. Pfaff v. Wells Electronics, Inc., 48 USPQ2d 1641, 1646 (1998). In the instant case, while the specification defines a few examples of what is meant by homolog (e.g. that LRP-6 is a homolog of LRP-5 and that there is a mouse LRP-5 homolog), the specification does not provide guidance as to how to obtain other homologs of LRP-5. The specification teaches that an artisan could use hybridization and stringent conditions to arrive at other HBM polynucleotides, however, nothing in the specification provides guidance as to what relevant identifying characteristics of all the nucleic acid sequences which hybridize but do not encode a HBM or LRP-5 protein. The skilled artisan cannot envision all the possible variant nucleic acid sequences which would hybridize but do not encode HBM or LRP-5 protein, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method used. In addition to this issue, the specification teaches that, "an HBM protein is defined for any organism that encodes a LRP-5 true homolog. For example, a mouse HBM protein refers to the mouse LRP-5 protein having the glycine 170 to valine substitution." While the specification provides this guidance of a mouse HBM protein, the specification does not teach how to arrive at a homolog of SEQ ID NO. 4 containing a glycine 171 to valine substitution, as written claim 1. According to the GenBank, Accession No. NP_032539, mouse LRP-5 protein, amino acid 171 is glutamic acid (see printout, Genbank [online], 2006 [retrieved on 2006-06-30]. Retrieved from the Internet:< URL: http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&val=6678716>, pages 1-5). Similarly, GenBank, Accession No. NP_002327, human LRP-6 protein, amino acid 171 is a serine (see printout, GenBank [online], 2006 [retrieved on 2006-06-30]. Retrieved from the Internet:< URL:

http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&val=4505017>, pages 1-5). Based the requirement of the claim, to target amino acid 171, it is not clear how an artisan would determine which amino acid to target such that has the equivalent function as human HBM, which has a val at position 171. No guidance was provided as to what structural and functional requirement is needed such that an artisan arrives at any HBM protein. As such, it is not entirely clear how an artisan could arrive at homologs of SEQ ID NO. 4 when amino acid 171 is glutamic acid or a serine.

Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of identifying it. See *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016 (Fed. Cir. 1991).

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481, 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, only human HBM, wherein human HBM is SEQ ID NO. 4 in claim 1 meet the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Claims 1-13, 45-48 remain rejected in modified form under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a transgenic mouse comprising a transgene construct comprising a nucleic acid sequence, SEQ ID NO. 2, encoding human High Bone Mass (HBM) protein, operably linked to a promoter, stably integrated in its genome, wherein said mouse exhibits and increase in bone mass in more than one parameter selected from among bone density, bone strength, trabecular number, bone size, and bone tissue connectivity,

does not reasonably provide enablement for

a transgenic rodent comprising a nucleic acid sequence comprising SEQ ID NO. 2 or a homolog which encodes a glycine 171 to valine substitution.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims for reasons of record, June 9, 2005 and January 27, 2006.

Applicant's amendments have raised new issues of enablement and a discussion regarding these new issues is as follows. Applicant's response to the rejections of January 27, 2006 follows this discussion.

The claims are drawn to a transgenic rodent comprising a nucleic acid sequence of SEQ ID NO. 2 or its homolog which encodes a glycine 171 to valine substitution or a nucleic acid sequence that encodes SEQ ID NO. 4 or its homolog containing a glycine 171 to valine substitution. As discussed above in the Written Description rejection, while the specification contemplates variants of LRP-5 and homologs of LRP-5 and also contemplates an amino acid substitution that changes the activity of LRP-5 into a protein that results in high bone mass in mice and humans that express it, the specification does not provide guidance for an artisan to arrive at the variety of homologs of SEQ ID NO. 1 and more particularly how to arrive at homologs of SEQ ID NO. 4 that have a glycine at position 171, wherein a valine is subsequently substituted for the glycine. While the specification provides examples of what is envisioned to be homologs of human LRP-5 (e.g. mouse LRP-5 and human LRP-6), the specification does not provide guidance for an artisan to obtain homologs of LRP-5 and eliminate those that are not LRP-5. Similarly, with regard to obtaining homologs of HBM, the specification also does not provide guidance for an artisan to arrive at HBM proteins, wherein the HBM protein is an LRP protein that has a glycine at position 171. In the absence of such description, the artisan cannot envision the detailed chemical structure of the sequences which comprise a homolog of SEQ ID NO. 4.

In addition to this issue, the art teaches that an artisan cannot reasonably predict that expression of a protein from a heterologous species of animal will necessarily have activity. For example, Hammer et al. 1986, J. of Anim. Sci., 63: 269-278 teach that while transgenic mice that overexpressed human growth hormone exhibited enhanced growth, transgenic pigs that expressed human growth hormone did not increase weight gain (Hammer et al., page 276, under “Effect of Foreign GH on Growth”). As this issue applies to the instant invention, an artisan cannot reasonably predict that heterologous proteins necessarily will have activity in other species of animals. While the specification teaches human HBM expressed in transgenic mice, the specification does not teach other rodents that express human HBM and have the same phenotype as that of mice and humans. Note, as discussed below, that in addition to rats, a dictionary definition of "rodents" also encompasses squirrels and beavers. In view of the teachings of Hammer et al., an artisan cannot reasonably predict that human HBM has predictable activity in other transgenic animals.

Response to Arguments

Applicant's arguments, see pages 12-19, filed April 27, 2006, with respect to the rejection of claims 1-13, 45-48 have been fully considered and are persuasive in part.

With regard to the claims being previously drawn to a transgenic non-human animal "comprising at least 15 contiguous nucleotides of SEQ ID NO. 2, including at least the thymine at positions 582 of SEQ ID NO. 2," Applicant has amended the claim and deleted the phrase (Applicant's response, page 13, under section 6.1). Applicant has overcome this aspect of the rejection and the rejection regarding this issue is withdrawn.

With regard to the use of any promoter (Applicant's response, page 15, under section 6.3), Applicant indicates that the specification teaches that transgenic mice comprising the HBM transgene exhibit changes in lipid levels and the specification is not as limited only to a bone phenotype. Applicant has overcome this aspect of the rejection and the rejection regarding this issue is withdrawn.

Applicant indicates the statement on page 8 of the January 27, 2006 Office Action, "no utility can be ascribed to an animal that expresses a part of HBM and has no phenotype," was made and that no rejection under 35 U.S.C. 101 was made by the Office. In response, to clarify the issue, the statement was not a utility rejection, but is an enablement rejection as enablement depends on an artisan's ability to make and use the claimed invention. The rejection is not a utility rejection because the claims encompass at least one working embodiment, i.e. mice with a bone phenotype. It should be made clear that as the rejection was written on pages 7 and 8 that the issue at hand was that there was no guidance for an artisan to use mice that have no phenotype. This is discussed further below. However, with regard to the phrase, "comprising at least 15 contiguous nucleotides of SEQ ID No. 2, including at least the thymine at position 582 of SEQ ID NO. 2," which was originally part of the text in the claims of November 9, 2005, Applicant has deleted the phrase and has overcome this issue of the rejection. The rejection, as it applies to this issue is withdrawn.

Applicant indicates the claims have been amended to remove the phrase, "bone human cells," as the claims originally read on a human bone cell transplant. The amendment overcomes this issue of the rejection and the rejection as it applies to this issue is withdrawn.

However, the claims remain rejected as follows.

Applicant provides a response that the specification supports transgene constructs in other animals (Applicant's response, pages 13-15, section 6.2). Applicant indicates that it would have been evident to one of skill in the art at the time to screen transgenic animals for those that express the desired nucleic acid and corresponding polypeptide. Further, transgenic animal technology and techniques have been around since the 1980s (Applicant's response, page 13). In response, the Examiner was not questioning that an artisan was physically able to make a transgene construct and to arrive at an animal that expresses a transgene. Rather, the issue at hand was whether the transgenic animal exhibited a phenotype and whether that phenotype was related to the expressed transgene. Applicant indicates that the reliance of the Office on Hammer et al., 1990, is misplaced as the Office cannot rely on this reference because the claims are directed to a different disease and different gene (Applicant's response, page 14, 1st parag.). In response, the Hammer et al., 1990 is germane to the discussion because Hammer et al. illustrate that an artisan cannot reasonably predict that introducing any transgene construct will necessarily result in an animal with a phenotype. Applicant also indicates that the specification teaches that the transgenic mice express the human sequence and that the mice exhibit high bone mass. With regard to this teaching in the specification, the Examiner was not questioning the mice taught in the specification and has indicated that the mice specifically taught in the specification were enabled (see scope of rejection, above). Rather, the Examiner was indicating that based on the teachings of Hammer et al., an artisan cannot readily extrapolate that one expression construct would necessarily work in other transgenic animal systems such as sheep, chickens, and fish. With regard to Applicant narrowing the claims to encompass "rodents," the amendment does not overcome the issue at hand as to whether an artisan would have been able to arrive at the claimed invention for its scope of rodents. Rodents, in addition to mice, encompass "any of various mammals of the order Rodentia, such as rat, squirrel, or beaver, characterized by large incisors adapted for gnawing or nibbling (The American Heritage Dictionary of the English Language, 4th Edition [online], 2000 [retrieved on 2006-06-30]. Retrieved from the

Internet:<URL:http://dictionary.reference.com/browse/rodent >, pages 1-2, 1st entry)." As such, in light of Hammer et al. teaching the unpredictability in using a transgene construct in different species of animals (i.e. rat and mouse), an artisan could not reasonably predict that any transgene construct would necessarily have activity in other species of animals. Applicant indicates that animal models exist for bone study in rat and mouse (Applicant's response, page 14, 1st parag.). In response, the question at hand is not whether rodents could be viable models for bone studies. Rather, the question was whether the broad scope of any transgenic rodent comprising a transgene construct expressing SEQ ID NO. 4 would result in a phenotype that correlated with the expression of SEQ ID NO. 4 and could subsequently be used as a model of a disease or disorder. While Applicant has shown transgenic mice comprising a transgene construct that expresses SEQ ID NO. 4, wherein mice exhibit high bone mass, Applicant has not show that other rodents comprising the same transgene construct also exhibit the same phenotype. As such, the rejection as it applies to this issue remains.

Applicant states that the Office asserts that the claims do not indicate a phenotype is incorrect and points to claim 4, which contains a phenotype. Applicant indicates that amended claim 1 recites a phenotype (Applicant's response, page 14, 2nd parag.). In response, while one set of claims recite a phenotype, other claims do not. As such, it is unclear how to use the claimed rodents without a phenotype. Claims 2, 46 do not recite a phenotype. As such, the rejection as it applies to this issue remains.

Applicant indicates that the Hammer et al. provides teaching that the transgene constructs do not necessarily have the same biological activities in other animals. Applicant indicates that there is a 94% polypeptide sequence identity between the mouse and human sequence and that the human sequence, when expressed in mice yields a high bone mass phenotype (Applicant's response, page 14, 3rd parag.). In response, while Applicant indicates that there is a 94% polypeptide sequence identity between the mouse and human sequence, the specification does not provide guidance for an artisan to arrive at other HBM homologs that have activity resulting in a high bone mass phenotype (see Written Description, for further guidance). As such, while the specification teaches that human HBM has activity in mice, the specification does not provide guidance to obtain HBM from other species of animals which necessarily have this activity when expressed. As such, the issue regarding this rejection is maintained.

Applicant traverses the rejection as it applies to the Albrecht et al. reference (Applicant's response, pages 16-17, under section 6.6). Applicant indicates that there are working examples of a transgenic rodent with increased bone mass. Further, Elbrecht et al. is a reference from 1987 and the instant application is 14 years after the publication of the Elbrecht article, during which additional promoters and methods of producing transgenic mice evolved. In response, the issue at hand of the Elbrecht et al. reference was not about promoters and methods of making transgenic mice. Rather, the issue was that the claims encompass mice comprising an episomal construct. Elbrecht et al. teaches that using episomal plasmids that do not integrate into the genome results in mosaic mice because the plasmid injected into the fertilized egg of the mice distributes randomly upon cell division. It thus follows that an artisan cannot reliably arrive at mice with a bone phenotype as there is no way to control how many copies of plasmid make its way into bone cells such that a bone phenotype is seen. As such, because Elbrecht et al. teach that making transgenic mice is unpredictable, an artisan is not enabled to arrive at the claimed invention. As such, the issue regarding this rejection remains.

Applicant indicates that the rejection of issues as it applies to gene therapy is inappropriate (Applicant's response, pages 18-19, under section 6.7). Applicant indicates that the claims are directed to a transgenic non-human vertebrate animal and these are not methods of treating an animal using gene therapy. In response, the rejection as it applies to "gene therapy" is germane to the rejection because the steps of gene therapy, i.e. administration of a nucleic acid construct (e.g. plasmid, virus) comprising a transgene, to an animal wherein the vector enters a cell and actively transcribes mRNA of the transgene, renders the animal "transgenic." These method steps of "gene therapy" is encompassed by the definition of "transgenic animal" provided in the specification, page 28, 2nd parag.:

> A 'transgenic animal' is an animal containing one or more cells bearing genetic information received directly or indirectly, by deliberate genetic manipulation or by inheritance from a manipulated progenitor at a subcellular level, such as by microinjection of infection with a recombinant viral vector (e.g., adenovirus, retrovirus, herpes virus, adeno-associated virus, lentivirus). This introduced DNA molecule may be integrated within a chromosome, or it may extra-chromosomally replicating DNA.

Applicant asserts that the specification provides no guidance as to any vector that can be used to generate a transgenic animal is wholly inappropriate (Applicant's response, page 18, 3rd parag.). In response, the specification envisions vectors such as viral vectors and plasmid; however, according to the art, there are problems with administration of plasmid and viral vectors that it is unclear how an artisan is able to use plasmid and viral vectors, administered to any rodent, and arrive at a bone phenotype encompassed by the claims. Applicant indicates that there is data for transgenic animals exhibiting the HBM phenotype and that the specification teaches the preparation of the transgene. In response, the broadest interpretation of the claim is not so limited to the exact steps of making the claimed invention, i.e. the transgenic rodents, wherein the claimed rodents are made by a specific method described in the specification. As such, making "transgenic" animals via gene therapy would be applicable to the claims. With regard to Applicant indicating that the claims are not directed to gene therapy or a method of treating (Applicant's response, page 18, 4th parag.), the issue at hand is that the method steps of gene therapy, i.e. administration of a nucleic acid construct, could be readable as a method used to arrive at the claimed invention. That is, the claims, as read, read on mice, injected in the leg with a plasmid construct. Note that the claim 1 can be read, "a transgenic rodent having somatic cells comprising a nucleic acid...", which would then encompass mice comprising a transgene construct made via method steps of gene therapy. However, the specification provides no guidance for an artisan to arrive at the claimed invention via gene therapy. For this reason, the rejection remains.

Conclusion

No claims allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joanne Hama, Ph.D. whose telephone number is 571-272-2911. The examiner can normally be reached Monday through Thursday and alternate Fridays from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, Ph.D. can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

JH

ANNE M. WEHBE' PH.D
PRIMARY EXAMINER